Abstract of the Disclosure

Disclosed is a method of detecting abnormal traffic at the network level using a statistical analysis and a computer-readable recording medium for recording a program that implements the method. The method includes the steps of: a) gathering local traffic data from each network device and integrating a plurality of the local traffic data to generate traffic data in a network level; b) extracting a characteristic traffic data based on the traffic data in the network level; c) comparing the characteristic traffic data with a characteristic traffic data profile resulting from statistical computations, and determining whether there is abnormal traffic in the network; and d) updating the characteristic traffic data profile using the characteristic traffic data if there is no abnormal traffic in the network, analyzing seriousness of the abnormal traffic and monitoring the abnormal traffic if there is abnormal traffic in the network.